

Fig. E-1

Graph showing the time for the *Propionibacterium acnes* cultures to turn positive for the cases with positive *Propionibacterium acnes* cultures. The diamonds show the days after surgery for the first positive culture, and the triangles show the last positive culture for the cases in which there were more than one positive culture.

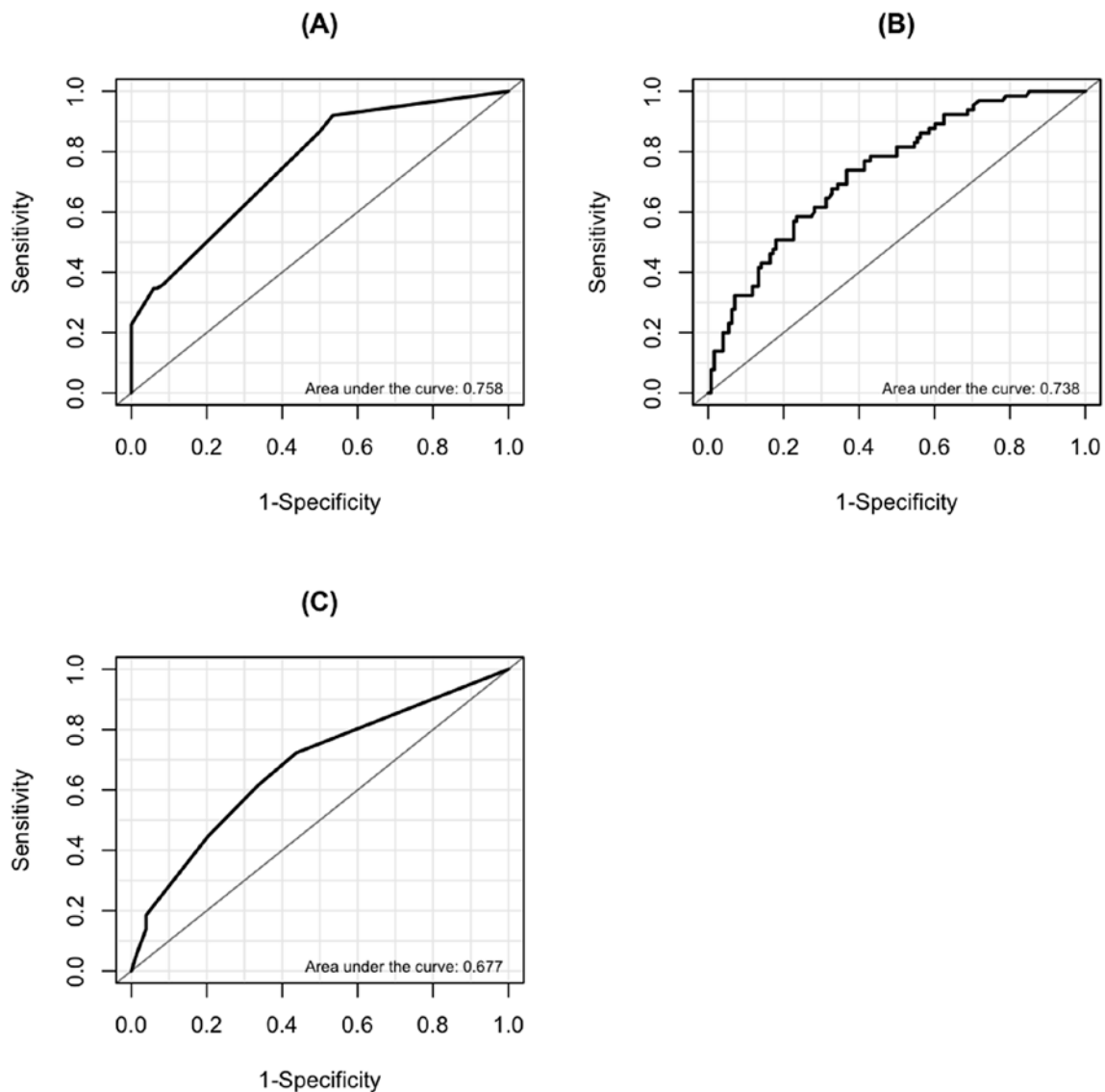


Fig. E-2

Receiver operating characteristic curves for multivariate models. A, Stage-2 and 3 model for *Propionibacterium acnes*. B, Stage-1 and 2 model for other organisms (includes date of surgery). C, Stage-1 and 2 model for other organisms (excludes date of surgery).

TABLE E-1 Patient and Surgery Characteristics for All Shoulders

Variable	Value*
Factors before surgery	
Age (yr)	61.4 ± 11.7
Number prior surgeries	2.5 ± 1.5
Procedure date (years since 2000)	8.6 ± 1.4
Preop. WBC (mg/L)	7.1 ± 2.0
Preop. ESR (mm/hr)	11.4 ± 13.4
Preop. CRP (thousands per $\mu$ L)	7.9 ± 20.4
Male	119 (62%)
Rheumatoid arthritis	15 (8%)
Diabetes	31 (16%)
Smoking history	37 (19%)
Hepatitis	5 (3%)
Thyroid	29 (15%)
Gout	9 (5%)
Congestive heart failure	8 (4%)
Neoplasm	23 (12%)
Obesity	11 (6%)
Acne	2 (1%)
Renal failure	5 (3%)
Systemic symptoms	7 (4%)
Local symptoms	15 (8%)
Glenoid loosening on radiograph	52 (27%)
Glenoid osteolysis on radiograph	11 (6%)
Humeral loosening on radiograph	23 (12%)
Humeral osteolysis on radiograph	13 (7%)
Total shoulder	84 (44%)
Hemiarthroplasty	109 (56%)
Factors at surgery	
Antibiotics withheld	152 (79%)
Humeral loosening	29 (15%)
Glenoid loosening	59 (31%)
Glenoid wear	36 (19%)
Osteolysis	20 (10%)
Membrane	35 (18%)
Cloudy fluid	8 (4%)
Humeral head exchanged	75 (39%)
Humeral head and body exchanged	77 (40%)
Humeral component removed, no replant	14 (7%)
Antibiotic spacer inserted	12 (6%)
Humeral implant inserted	3 (2%)
Glenoid component removed, no replant	53 (27%)
Glenoid component exchanged	16 (8%)

Glenoid component implanted	55 (28%)
Operative note mentions evidence of infection	38 (20%)
Number of cultures per surgery	3.8 ± 1.9
Pathology	
Acute inflammation	14 (7%)
Chronic inflammation	50 (26%)
Foreign-body reaction	46 (24%)

\*The values are given as the mean and the standard deviation or as the number of procedures, with the percentage in parentheses. N = 193 procedures except for all values except Preop. WBC (N = 183), Preop. ESR (N = 119), and Preop. CRP (N = 119).